

# TC-780

*Professional  
Two-way Radio*



- Wide Band Coverage
- Powerful Audio Output
- Multiple Safety Assurance
- Build-in Scrambler

www.hytera.com

Hytera Communications Corporation Limited

## Applicable Military Standards 810C/D/E/F

| Applicable MIL-STD | 810C<br>Methods Procedures | 810D<br>Methods Procedures | 810E<br>Methods Procedures | 810F<br>Methods Procedures |
|--------------------|----------------------------|----------------------------|----------------------------|----------------------------|
| Low Pressure       | 500.1 1                    | 500.2 1,2                  | 500.3 1,2                  | 500.4 1                    |
| High Temperature   | 501.1 1,2                  | 501.2 1,2                  | 501.3 1,2                  | 501.4 1,2                  |
| Low Temperature    | 502.1 1                    | 502.2 1,2                  | 502.3 1,2                  | 502.4 1,2                  |
| Temp. Shock        | 503.1 1                    | 503.2 1                    | 503.3 1                    | 503.4 1                    |
| Solar Radiation    | 505.1 1                    | 505.2 1                    | 505.3 1                    | 505.4 1,2                  |
| Rain               | 506.1 2                    | 506.2 2                    | 506.3 1,2                  | 506.4 1,2                  |
| Humidity           | 507.1 2                    | 507.2 2,3                  | 507.3 2,3                  | 507.4 1                    |
| Salt Fog           | 509.1 1                    | 509.2 1                    | 509.3 1                    | 509.4 1                    |
| Dust               | 510.1 1                    | 510.2 1                    | 510.3 1                    | 510.4 1                    |
| Vibration          | 514.2 8,10                 | 514.3 1                    | 514.4 1                    | 514.5 1                    |
| Shock              | 516.2 1,2,5                | 516.3 1,4                  | 516.4 1,4                  | 516.5 1,4                  |

## General

|                                                         |                                                                                                                              |
|---------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|
| Frequency Range (MHz)                                   | VHF: 136-174 UHF: 350-390/400-470                                                                                            |
| Channel Capacity                                        | 256                                                                                                                          |
| Channel Spacing (KHz)                                   | 25/20/12.5                                                                                                                   |
| Operating Voltage (V)                                   | 7.4 +/- 15%                                                                                                                  |
| Battery                                                 | 1700mAh Li-ion Battery                                                                                                       |
| Battery Life (5-5-90 Duty Cycle)                        | Low power High power                                                                                                         |
| with 1700mAh Li-ion battery                             | 13 hours 10 hours                                                                                                            |
| with 2100mAh Li-ion battery                             | 16 hours 13 hours                                                                                                            |
| with 1800mAh Ni-MH battery                              | 14 hours 11 hours                                                                                                            |
| Frequency Stability (ppm)                               | ± 2.5                                                                                                                        |
| Operating Temperature (°C)                              | -30~+60                                                                                                                      |
| Antenna Impedance (Ω)                                   | 50                                                                                                                           |
| Dimensions (H×W×D)(with battery, with out antenna) (mm) | 126*54*35mm, 360g;<br>with 1700mAh Li-ion battery<br>126*54*39mm, 375g;<br>with 2100mAh Li-ion battery<br>126*54*39mm, 450g; |
| Material of Front Case                                  | PC (EXL9330)+PC (2405)                                                                                                       |

## Transmitter

|                              |                                      |
|------------------------------|--------------------------------------|
| RF Power Output              | 5W/2W/1W (UHF/VHF)                   |
| Modulation                   | 16K Φ F3E/11K Φ F3E                  |
| Spurious and Harmonics       | -36dBm<1GHz<br>-30dBm>1GHz           |
| FM Noise                     | 45/40 dB (25/12.5KHz)                |
| Audio Distortion             | ≤3%                                  |
| Modulation limiting          | ±2.5@12.5KHz; ±4.0@20KHz; ±5.0@25KHz |
| Adjacent Channel Selectivity | 70/60dB (25/12.5KHz)                 |
| Audio response(300-3000Hz)   | +1 to -3 dB                          |

All Specifications are tested according to TIA/EIA-603, and subject to change without notice due to continuous development.

## Receiver

|                             |                                      |
|-----------------------------|--------------------------------------|
| Sensitivity                 | ≤0.25/0.35 μ V (25/12.5KHz)          |
| Selectivity                 | 70/60 dB                             |
| Intermodulation             | 65 dB                                |
| Spurious Response Rejection | 70 dB                                |
| S/N                         | 45/40 dB (25/12.5KHz)                |
| Rated Audio Power Output    | 0.8W                                 |
| Rated Audio Distortion      | ≤5%                                  |
| Audio Response(300-3000Hz)  | +1 to -3 dB                          |
| Conducted Spurious Emission | -57dBm<1GHz -47dBm>1GHz<br>EN300 086 |



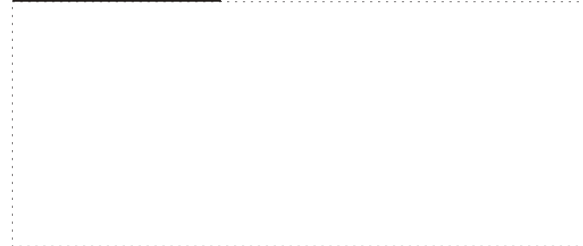
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## Your Local Dealer



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## Recommended Applications

- Police
- Firefighting
- Security
- Government

## Accessories

| Standard Accessories | Antenna<br>Li-ion battery(1700mAh) BL1703 | Strap RC04 | Belt clip BC08 (compatible with BL1703)<br>Switching power adapter PS1009 (for use with different power cords in different countries and areas) | MCU rapid-rate charger (for Li-ion/Ni-MH Batteries) CH10L07 |
|----------------------|-------------------------------------------|------------|-------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------|
|----------------------|-------------------------------------------|------------|-------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------|

### Optional Accessories



Earbud with in-Line PTT ESX05  
Earbud with on-MIC PTT ESX06



Neck 2-wire earpiece with wireless earphone and neck loop EWN03



Earpiece with on-MIC PTT & transparent acoustic tube EAN04



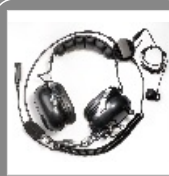
Remote speaker microphone SM08N1  
Received only earpiece with transparent acoustic tube (remote speaker MIC used only) ESS08  
Received only earbud (remote speaker MIC used only) ESS07



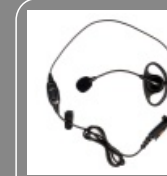
Noise-canceling remote speaker microphone (350-390MHz/440-470MHz) SM13N4  
Water resistant remote speaker microphone(IP56) SM13N5



Light weight, throat-vibrating earpiece ELN02  
Ear canal bone induction earpiece EBN01



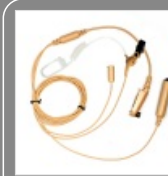
Heavy duty, noise-canceling headset ECN08  
Behind-the-head, noise-canceling headset ECN09



D-earset with boom microphone & in-line PTT EHN08  
D-earset with in-line PTT & microphone EHN07



Light-weight, single-muff headset with in-line PTT ECN07



3-wire surveillance earpiece with transparent acoustic tube EAN06 (beige)  
3-wire surveillance earpiece with transparent acoustic tube EAN02 (black)  
2-wire surveillance earpiece with transparent acoustic tube EAN07 (black)



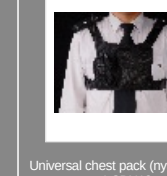
Six-unit switching power (for use with different power cords in different countries and areas) PS7002  
Vehicle adapter for charger CHV09



MCU rapid-rate multi-unit charger for Li-ion/Ni-MH batteries MCA03



Ni-MH battery (1800mAh) BH1801  
Li-ion battery (2100mAh) BL2102



Universal chest pack (nylon)(black) LCBN13



Leather carrying case (swivel) LCBY22

- ★ Antenna
- Belt clip BC09 (compatible with BH1801&BL2102)
- Programming cable (COM port) PC18
- Programming cable (USB to serial port) PC25

Staff members in these industries, such as public security, government, wharf, water resource and power, large hotel, logistics and etc, are usually divided into many groups. A radio without LCD and keypad applied in these industries cannot realize individual call and grouping communications management, thus it is inconvenient for the clients. However, all these troubles shall be solved when you choose HYT TC-780.

TC-780, as the medium to high tier portable radio with LCD, numeric keypad, wide-band coverage and 256 channels, has integrated cutting-edge analog technology, and shall definitely fulfill your every demand on grouping and dispatching. We believe that HYT TC-780 will bring you the most cost-effective use experience thanks to its powerful functions and reliable performance.

# TC-780

Professional Two-way Radio

## Super Features

### Wide Band Coverage

Allow users the flexibility to select their frequency for use in their respective work environment.

### Powerful Audio Output

HYT's voice compandor audio enhancement and a powerful 1.5W speaker (with a diameter of 40mm) ensure superb clear, crisp sound even in noisy environments.

### Safety Assurance

Safety and security are critical factors for modern organizations. The TC-780's Lone Worker, Safety Check, and Man Down (optional) features are designed to assure your safety in case of emergencies or accidents.

### Build-in Scrambler

The Scrambler feature makes it impossible for an eavesdropper to understand your conversation. TC-780 is your best choice for public security communication and private safety communication.

### Whisper

The Whisper feature means that even the quietest message can be transmitted and understood.

### 5-Tone and HDC2400™ Signaling

5-Tone, taking audio signal as media, is the kind of signaling that is extensively used nowadays. The system including 5-Tone can achieve ANI (Automatic Number Identification), call timer, selectable call (individual call, group call), alert call, status inquiry, stun/unstun, authorization, etc. The HDC2400™ is HYT proprietary signaling, and contributes to the system to achieve features including ANI (Automatic Number Identification), Call Timer, Record, Record Inquiry, Select Call (Individual Call, Group Call, Zone Call and Broadcast), Alert Call (Individual Call, Group Call, Zone Call and Broadcast), Status Inquiry, Safety Check, Kill/Stun/Revive, etc.

### Future Development

Expansion Ports Expansion ports are reserved for future development in TC-780.

### Firmware Upgradeable

Considering future expansion, TC-780 whole solution utilizes built-in Flash MCU. You can upgrade the radio firmware to include the latest features.

## Unique Features

### High Channel Capacity

Maximum 256 channels allow you to assign user-recognizable channel name; flexible grouping (maximum 32 groups) can make team management more effective.

### Battery Strength Indicator

The current battery strength is displayed on the LCD.

### High (5W) Transmit Power

The strong power can completely secure your long-distance communication.

### Embedded Message & Serial Number

The radio's memory can store messages including service and programming records, for remarkable ease of maintenance. The feature also makes a unit identifiable by Serial Number.

### Call List Check

There are four types: 1. Contact list; 2. Status List; 3. Missed call list; 4. Received call list.

### Call Forward

After decoding is succeeded, radio would transmit a call signaling preset by your dealer.

### Phone

Allow you to call a base station or connect with telephone line to call a telephone subscriber.

### Scan

Allow the user to monitor activities on different channels. "Dual Priority Scan" and "Nuisance Temporarily Delete" are of options; each scan list may include up to 32 channels.

### Lone Worker

The Lone Worker feature provides added security and safety for individuals who work remotely from their team. Should a user not respond to a regular warning tone, a defined emergency procedure is activated.

### Safety Check

Should the user not respond to a safety check signal received from the dispatch center or an authorized radio, a defined emergency procedure is activated.

### Emergency

Press the Emergency key to emit emergency alarm, or send ENI (Emergency Number Identity) / background tone to a pre-defined person or the dispatch center (selectable via programming software).

### Vibrate (optional)

TC-780 supports a vibrate option. The vibrate indication helps in working conditions where quiet operation is required.

### Man Down (optional)

Providing even greater safety for employees in hazardous environments, the TC-780 radio provides a Man Down feature. This feature automatically summons assistance when the radio falls over for a predetermined time period.



## Mechanical Features

- ★ Reliability and Durability  
The radio uses components of famous brand, and meets strict tests.
- ★ Ergonomic Design
- ★ Laser-etched Nameplate

## Other Features

- ★ CTCSS/CDCSS
- ★ Voice Compandor
- ★ MSK Wireless Clone
- ★ PC Tuning
- ★ Authorization Management
- ★ PTT Key-up Encode/De-Key Encode
- ★ Battery Save
- ★ Low Battery Alert
- ★ Kill/Revive
- ★ Programmable Function Keys
- ★ Talkaround
- ★ Programmable Alert Tone
- ★ Auto Acknowledgement
- ★ VOX
- ★ Password Protection
- ★ RSSI